

CWA-854HT

54 Mbps Wireless-G High Transmission Access Point



User's Guide

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Chapter 1. Introduction

1.1. About the CWA-854HT

Thank you for choosing the CNet CWA-854HT 54Mbps Wireless-G High Transmission AP. With the CWA-854HT 54Mbps Wireless-G High Transmission AP, you can extend wireless connectivity to mobile users easily and securely. With its compact design, the CWA-854HT 54Mbps Wireless-G High Transmission AP is easy to set up and configure with the embedded web-based configuration screens.

In this guide, the CNet CWA-854HT 54Mbps Wireless-G High Transmission AP will be referred to as the “wireless access point”.

1.2. Main Features

The following lists the main features of the CWA-854HT.

- IEEE 802.11g and 802.11b Wireless LAN Access.
- Data and network security with wireless 64-bit and 128-bit WEP data encryption.
- Wi-Fi WPA and WPA2 wireless security.
- Wireless access control by MAC addresses.
- WDS to extend wireless coverage.

1.3. Getting to Know the CWA-854HT

This section describes the panels of the CWA-854HT. Refer to the *Quick Installation Guide* for more information on the hardware connections and initial setup.

1.4. The Front Panel

The LEDs are located on the front panel of the CWA-854HT.

Figure 1-1 The Front Panel

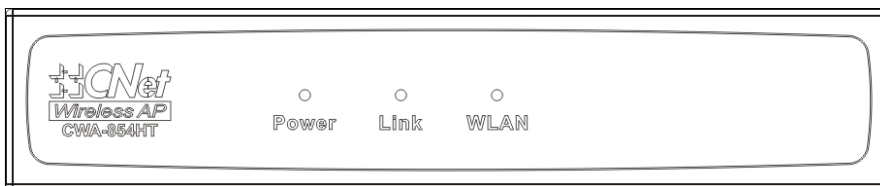


Table 1-1 The Front Panel

LABEL	COLOR	STATUS	DESCRIPTION
Power	Green	On	The CWA-854HT is receiving power.
		Off	The CWA-854HT is not receiving power.
WLAN	Green	On	The wireless interface is ready.
		Off	The wireless interface is not ready or the CWA-854HT is performing system test.
LINK	Yellow	On	The LAN port is connected to an Ethernet device.
		Off	No Ethernet device is connected to this port.

1.5. The Rear Panel

The power and port connectors are located on the rear panel of the CWA-854HT.

Figure 1-2 The Rear Panel

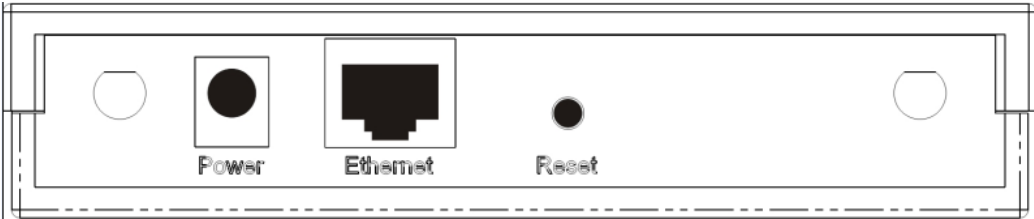


Table 1-2 The Rear Panel

LABEL	DESCRIPTION
Power	Connect this port to a power source using only the included power adapter.
Ethernet	Connect a LAN port to a computer using an Ethernet cable.
Reset	Use the Reset button to reset the AP to its factory default settings. Press and hold the Reset button for 10 seconds to reset the IP and password to default.

Chapter 2. Configuring the CWA-854HT

This chapter describes how to access the CWA-854HT and the configuration screens.

2.1. Introduction

The CWA-854HT is designed to function in most network environment with the default settings. However, you can access the web-based utility on the CWA-854HT to configure basic and advanced device settings.

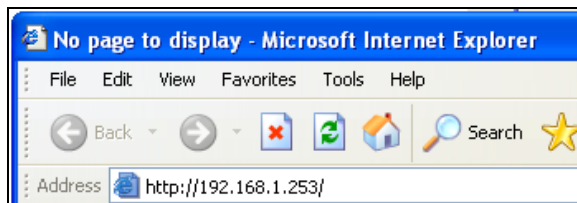
In this guide, the web-based utility is referred to as the WebGUI.

2.2. Accessing the WebGUI

Follow the steps below to access the WebGUI on the CWA-854HT.

1. Make sure the IP address of your computer and the CWA-854HT are in the same range.
2. Open Internet Explorer (version 6 or later) and enter <http://192.168.1.253> (the default LAN IP address of the CWA-854HT) in the address bar.

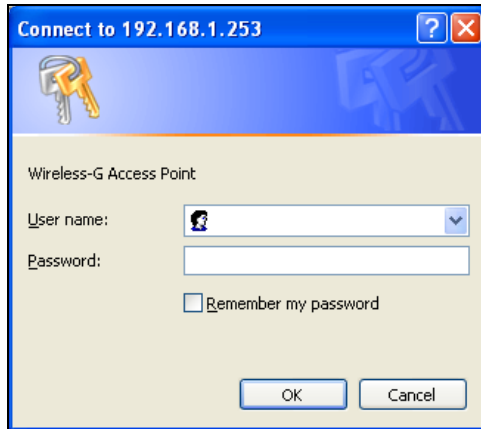
Figure 2-1 Internet Explorer: Web Site Address



3. A login screen displays. Enter the user name (default is **root**) and password (default is **1234**). Click **OK** to login.

The user name and password are case-sensitive.

Figure 2-2 Login Screen



4. The main utility screen displays.

Figure 2-3 WebGUI Main Screen



2.3. Common WebGUI Buttons

The following table describes the buttons found in CWA-854HT WebGUI screens.

Table 2-1 Common WebGUI Buttons

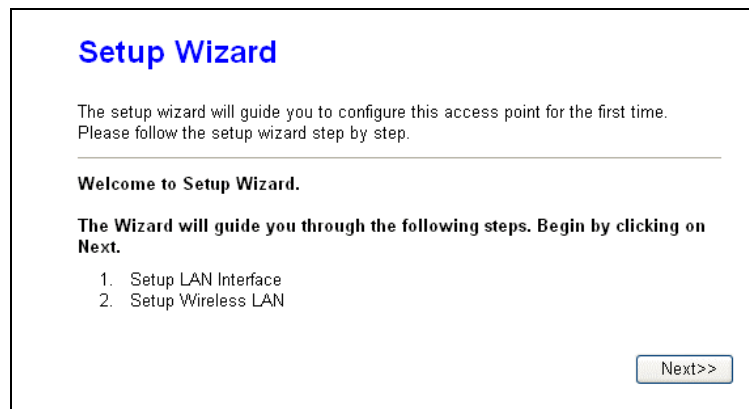
LABEL	DESCRIPTION
Next>>	Click Next>> to proceed in a series of screens.
<<Back	Click <<Back to return to the previous screen. You will lost all unsaved settings in the current screen.
Apply Changes	Click Apply Changes to save the changes. The CWA-854HT will reboot to make the changes take effect.
Reset	Click Reset to undo the changes.
Help	Click Help to display on-line help information in a pop-up screen.

2.4. Setup Wizard Configuration

This section describes the **Setup Wizard** screens. You can use the **Setup Wizard** to configure NTP (Network Time Protocol), LAN, WAN and wireless port settings.

The main **Setup Wizard** screen displays every time you access the CWA-854HT. Or, click **Setup Wizard** in the navigation panel. Click **Next>>** to continue.

Figure 2-4 Setup Wizard: Main



2.4.1. Setup Wizard: LAN Interface Setup

Configure the IP address and subnet mask of the LAN interface on the CWA-854HT in the second **Setup Wizard** screen.

Figure 2-5 Setup Wizard: LAN Interface Setup

1. LAN Interface Setup

This page is used to configure the parameters for local area network which connects to the LAN port of your Access Point. Here you may change the setting for IP addresss and subnet mask.

IP Address:

192.168.1.253

Subnet Mask:

255.255.255.0

Cancel

<<Back

Next>>

Table 2-2 Setup Wizard: LAN Interface Setup

LABEL	DESCRIPTION
IP Address	This field displays the current LAN IP address. To change the setting, specify a new IP address for the LAN interface. Enter the IP address in dotted decimal notation. For example, 192.168.1.253.
Subnet Mask	This field displays the current subnet mask. To change, enter a new subnet mask in dotted decimal notation. For example. 255.255.255.0.
Cancel	Click Cancel to start configuring the Setup Wizard again.
<<Back	Click <<Back to discard the changes and go back to the previous screen.
Next>>	Click Next>> to continue to the next screen.

2.4.2. Setup Wizard: Wireless Basic Settings

Configure basic wireless LAN and wireless security settings in the fourth **Setup Wizard** screen.

Figure 2-6 Setup Wizard: Wireless Basic Settings

2. Wireless Basic Settings

This page is used to configure the parameters for wireless LAN clients which may connect to your Access Point.

Band: 802.11 B/G

Mode: AP

Network Type: Infrastructure

SSID: Wireless-G AP

Channel Number: 11

☐ Enable Mac Clone (Single Ethernet Client)

☐ Enable Universal Repeater Mode

SSID of Extended Interface:

Cancel <<Back Finished

Table 2-3 Setup Wizard: Wireless Basic Settings

LABEL	DESCRIPTION
Band	If your wireless network contains only IEEE 802.11b devices, select 802.1 B . If your wireless network contains only IEEE 802.11g devices, select 802.1 G . If your wireless network contains both IEEE 802.11b and IEEE 802.11g devices, select 802.1 B/G .
Mode	In addition to setting the CWA-854HT as an AP (access point) bridging the wireless and wired networks, you can also set the CWA-854HT to other operating modes. The Client mode allows you the use the CWA-854HT as a wireless adapter for a computer. This allows the computer to connect to a wireless network. To wirelessly bridge two wired networks, use the WDS mode. Select AP + WDS mode to set the CWA-854HT to wireless bridge two networks and work as an

Table 2-3 Setup Wizard: Wireless Basic Settings

LABEL	DESCRIPTION
	access point at the same time.
Network Type	This field is applicable when you select Client in the Mode field. Select Infrastructure to allow a computer to connect to a wireless network via an access point. Select Ad-hoc to allow a compute to connect to another wireless-enable computer.
SSID	An SSID uniquely identifies a wireless network. All devices in a wireless network must use the same SSID to communicate with each other. Enter the name of a wireless network to which the computer connects.
Channel Number	A channel is the operating frequency in which a wireless device transmits data. The number of channels you can select varies depending on your country's regulation. Select a channel number the CWA-854HT is to use for wireless communication. To reduce interference, select a channel number that is further away from what the nearest wireless device/network uses. For example, if the nearest wireless device/network is using channel 6, set the CWA-854HT to use channel 11.
Enable MAC Cloning (Single Ethernet Client)	You can set the CWA-854HT to use the same MAC address on all outgoing packets through the WLAN interface. Thus the wireless network appears as a single Ethernet device to the external network. This increases the security level. Enter a computer's MAC address in six pairs of hexadecimal notation. For example, 00a0f45a0010.
Enable Universal Repeater Mode	When you enable this universal repeater function, the CWA-854HT will extend the wireless distance to connect another wireless router or AP.
SSID of Extended Interface	Input the Parent SSID, when you select the Universal Repeater Mode.
Cancel	Click Cancel to start configuring the Setup Wizard again.
<<Back	Click <<Back to discard the changes and go back to the previous screen.
Finished	Click Finished to save the settings. The CWA-854HT will reboot to make the changes take effect.

If you have changed the LAN IP address, you must use the new IP address to access the WebGUI again.

2.5. LAN Settings

The LAN (Local Area Network) is the network connected to a LAN port on the CWA-854HT. To configure LAN interface settings, click **LAN Settings** in the navigation panel.

Figure 2-7 LAN Interface Setup

LAN Interface Setup

This page is used to configure the parameters for local area network which connects to the LAN port of your Access Point. Here you may change the setting for IP addresss, subnet mask, etc..

IP Address:

192.168.1.253

Subnet Mask:

255.255.255.0

Default Gateway:

0.0.0.0

DNS Server:

802.1d Spanning Tree:

Disabled

Clone MAC Address:

000000000000

Apply Changes

Reset

Help

Table 2-4 LAN Interface Setup

LABEL	DESCRIPTION
IP Address	This field displays the current LAN IP address. To change the setting, specify a new IP address for the LAN interface. Enter the IP address in dotted decimal notation. For example, 192.168.1.253. When you change the LAN IP address, this also changes the DHCP client pool settings in the DHCP Settings screen. If DHCP server is enabled, restart your computer or network adapter to obtain an IP address from the CWA-854HT again.

Table 2-4 LAN Interface Setup

LABEL	DESCRIPTION
	To access the WebGUI again, enter the new LAN IP address.
Subnet Mask	This field displays the current subnet mask. To change, enter a new subnet mask in dotted decimal notation. For example, 255.255.255.0.
Default Gateway	Enter the IP address of the default gateway device.
802.1d Spanning Tree	IEEE 802.1d spanning tree protocol detects and eliminates network loops. A network loop may create duplicate broadcast packets that reduce network performance. Select Enabled to activate this feature.
Clone MAC Address	You can set the CWA-854HT to use the same MAC address on all outgoing packets through the LAN interface. Thus the LAN network appears as a single device to the external network. This increases the security level. Enter a computer's MAC address in six pairs of hexadecimal notation. For example, 00a0f45a0010.
Apply Changes	Click Apply Changes to save the changes. The CWA-854HT will reboot to make the changes take effect.
Reset	Click Reset to undo the changes.
Help	Click Help to display on-line help information in a pop-up screen.

2.6. Wireless: Wireless Basic Settings

Click **Wireless > Wireless Basic Settings**. Configure basic wireless settings in this screen.

Figure 2-8 Wireless: Wireless Basic Settings

Wireless Basic Settings

This page is used to configure the parameters for wireless LAN clients which may connect to your Wireless-G Access Point. Here you may change wireless encryption settings as well as wireless network parameters.

☐ **Disable Wireless LAN Interface**

Band:

802.11 B/G

Mode:

AP

Network Type:

Infrastructure

Site Survey

SSID:

Wireless-G AP

Regulation Domain:

ETSI

Channel Number:

11

Associated Clients:

Show Active Clients

☐ **Enable Mac Clone (Single Ethernet Client)**

☐ **Enable Universal Repeater Mode**

SSID of Extended Interface:

Apply Changes

Reset

Help

Table 2-5 Wireless: Wireless Basic Settings

LABEL	DESCRIPTION
Disable	Select this option to deactivate wireless capability on the CWA-854HT. No wireless connection is

Table 2-5 Wireless: Wireless Basic Settings

LABEL	DESCRIPTION
Wireless LAN Interface	allowed.
Band	If your wireless network contains only IEEE 802.11b devices, select 802.1 B. If your wireless network contains only IEEE 802.11g devices, select 802.1 G. If your wireless network contains both IEEE 802.11b and IEEE 802.11g devices, select 802.1 B/G.
Mode	In addition to setting the CWA-854HT as an AP (access point) bridging the wireless and wired networks, you can also set the CWA-854HT to other operating modes. The Client mode allows you the use the CWA-854HT as a wireless adapter for a computer. This allows the computer to connect to a wireless network. To wirelessly bridge two wired networks, use the WDS mode. Select AP + WDS mode to set the CWA-854HT to wireless bridge two networks and work as an access point at the same time. If you set the CWA-854HT in WDS modes, make sure you activate the spanning tree protocol to avoid network loops.
Network Type	This field is applicable when you select Client in the Mode field. Select Infrastructure to allow a computer to connect to a wireless network via an access point. Select Ad-hoc to allow a compute to connect to another wireless-enable computer.
Site Survey	This button is applicable when you select Client in the Mode field and Infrastructure in the Network Type field. Click Site Survey to open a screen displaying a list of available wireless networks/devices within transmission range. You can set the CWA-854HT to connect to a wireless network/device.
SSID	An SSID uniquely identifies a wireless network. All devices in a wireless network must use the same SSID to communicate with each other. Enter the name of a wireless network to which the computer connects.
Regulation Domain	Select the name of your regulation domain.
Channel Number	A channel is the operating frequency in which a wireless device transmits data. The number of channels you can select varies depending on the regulation domain you select. Select a channel number the CWA-854HT is to use for wireless communication.

Table 2-5 Wireless: Wireless Basic Settings

LABEL	DESCRIPTION
	To reduce interference, select a channel number that is further away from what the nearest wireless device/network uses. For example, if the nearest wireless device/network is using channel 6, set the CWA-854HT to use channel 11.
Associated Clients	Click Show Active Clients to display a screen showing the list of wireless clients that are currently connected to the CWA-854HT.
Enable MAC Cloning (Single Ethernet Client)	You can set the CWA-854HT to use the same MAC address on all outgoing packets through the WLAN interface. Thus the wireless network appears as a single Ethernet device to the external network. This increases the security level. Enter a computer's MAC address in six pairs of hexadecimal notation. For example, 00a0f45a0010.
Enable Universal Repeater Mode	When you enable this universal repeater function, the CWA-854HT will extend the wireless distance to connect another wireless router or AP.
SSID of Extended Interface	Input the Parent SSID, when you select the Universal Repeater Mode .
Apply Changes	Click Apply Changes to save the changes. The CWA-854HT will reboot to make the changes take effect.
Reset	Click Reset to undo the changes.
Help	Click Help to display on-line help information in a pop-up screen.

2.6.1. Wireless Basic Settings: Site Survey

When you set the CWA-854HT to work in wireless client mode, you can view a list of available wireless networks/devices in the **Site Survey** screen. Use this screen to establish a wireless connection to a device/network.

Figure 2-9 Wireless Basic Settings: Site Survey

Wireless Site Survey

This page provides tool to scan the wireless network. If any Access Point or IBSS is found, you could choose to connect it manually when client mode is enabled.

SSID

BSSID

Channel

Type

Encrypt

Signal

Refresh

Connect

Help

Note : When the **Connect** is disable, please go back wireless Basic Settings and click **Apply Changes** to enable the client mode first.

Table 2-6 Wireless Basic Settings: Site Survey

LABEL	DESCRIPTION
SSID	This field displays the name of a wireless network/device.
BSSID	This field displays for Infrastructure mode. This field displays the name of a wireless network.
Channel	This field displays the wireless channel number the wireless network/device uses.
Type	This field displays the wireless operating type (Infrastructure or Ad-hoc).
Encrypt	This field displays whether security is activated on the wireless network/device. If communication to a wireless network is encrypted, you must first configure the same wireless security settings and then connect to that wireless network.
Signal	This field displays the signal strength to the wireless network/device.
Refresh	Click Refresh to update this screen.
Connect	Click Connect to establish a connection to the select wireless network.
Help	Click Help to display on-line help information in a pop-up screen.

2.6.2. Wireless Basic Settings: Show Active Clients

When you set the CWA-854HT to work in access point (AP) mode, you can view a list of connected wireless clients in

the **Active Wireless Client Table** screen.

Figure 2-10 Wireless Basic Settings: Active Wireless Client

Active Wireless Client Table

This table shows the MAC address, transmission, reception packet counters and encrypted status for each associated wireless client.

MAC Address	Tx Packet	Rx Packet	Tx Rate (Mbps)	Power Saving	Expired Time (s)
None	---	---	---	---	---

RefreshClose

Table 2-7 Wireless Basic Settings: Active Wireless Client Table

LABEL	DESCRIPTION
MAC Address	This field displays the MAC address of a connected wireless client.
Tx Packet	This field displays the number of packets transmitted to this wireless device.
Rx Packet	This field displays the number of packets received from this wireless device.
Tx Rate (Mbps)	This field displays the transmission rate to this wireless device.
Power Saving	The power saving feature allows a computer to stop transmitting through the wireless adapter during sleep mode. This allows the computer (especially a notebook) to save energy. This field displays whether this feature is activated on the wireless client.
Expired Time (s)	By default, the CWA-854HT disconnects a wireless client after 300 seconds of inactivity (no beacon or data transmission). This field displays the time that remains before the CWA-854HT disconnects the wireless connection to the wireless client. The CWA-854HT resets this timer back to 300 when a beacon or data packet is received.
Refresh	Click Refresh to update this screen.

Table 2-7 Wireless Basic Settings: Active Wireless Client Table

LABEL	DESCRIPTION
Close	Click Close to close this screen.

2.6.3. Wireless: Wireless Advanced Settings

Click **Wireless > Advanced Wireless Settings** to display the configuration screen. The default wireless settings in this screen work in most wireless network environment.

Figure 2-11 Wireless: Wireless Advanced Settings

Wireless Advanced Settings

These settings are only for more technically advanced users who have a sufficient knowledge about wireless LAN. These settings should not be changed unless you know what effect the changes will have on your Wireless-G Access Point.

Authentication Type:

☐ Open System ☐ Shared Key ☒ Auto

Fragment Threshold:

(256-2346)

RTS Threshold:

(0-2347)

Beacon Interval:

(20-1024 ms)

Data Rate:

Wireless network coverage

Preamble Type:

☒ Long Preamble ☐ Short Preamble

Broadcast SSID:

☒ Enabled ☐ Disabled

IAPP:

☒ Enabled ☐ Disabled

802.11g Protection:

☒ Enabled ☐ Disabled

Turbo Mode:

☒ Auto ☐ Always ☐ Off

Table 2-8 Wireless: Wireless Advanced Settings

LABEL	DESCRIPTION
Authentication Type	IEEE 802.11b defines a basic authentication security using WEP (Wireless Equivalent Protocol) keys.

Table 2-8 Wireless: Wireless Advanced Settings

LABEL	DESCRIPTION
	Select Open System if you don't want to use a WEP key for authentication. Select Share Key to set the CWA-854HT and the peer wireless devices to authenticate each other with a WEP key. Select Auto to allow both open or shared authentication. The peer wireless device must also set to use the same authentication type.
Fragmentation Threshold	Specify the maximum packet size allowed before the CWA-854HT fragments data. If there are many error packets on the network, slightly increase the threshold. Setting the threshold too low decreases network performance. Always make a small change to the default settings.
RTS Threshold	The CWA-854HT will send a Request To Send (RTS) packet to a sending host. When an acknowledgement is received, the CWA-854HT sends a Clear To Send (CTS) packets to that host to allow data transmission. RTS/CTS eliminates the "hidden node" problem where two hosts are within range of each other but does not know each other's presence. If the number of packets is lower than the RTS threshold, this feature is not activated. If you are experiencing inconsistent data flow on the network, slightly reduce this number.
Beacon Interval	A beacon packet is broadcast by the CWA-854HT to synchronize the wireless network. The beacon interval allows a wireless client in power saving mode to know when to "wake up" and detect if there's packet waiting to be received. Specify the time period between beacon broadcasts.
Data Rate	Select a transmission rate the CWA-854HT uses to send data. Select Auto to allow the CWA-854HT to use the maximum transmission rate possible. If you specify a transmission rate here, make sure the peer wireless devices must also use the same rate for wireless communication.
Wireless network coverage	Select an option to set the wireless coverage range.
Preamble Type	A preamble is used to synchronize transmission timing. Select Long Preamble if there is interference in your wireless network or you are not sure about the preamble settings on other wireless devices. All IEEE 802.11b devices support long preamble. Select Short Preamble if all wireless devices support this mode. Short preamble reduces transmission overhead.

Table 2-8 Wireless: Wireless Advanced Settings

LABEL	DESCRIPTION
Broadcast SSID	You can set the CWA-854HT not to broadcast its SSID to increase wireless security. This prevents unknown wireless clients from knowing the presence of the CWA-854HT. Select Enabled to hide the SSID. Otherwise, select Disabled .
IAPP	IAPP (Inter Access Point Protocol) allows the CWA-854HT to communicate with neighboring access points for wireless roaming. Select Enabled to activate this feature; otherwise, select Disabled .
802.11g Protection	Unless you encounter severe connection problem to the CWA-854HT, do not enable this feature. When you select Enabled to activate this feature, the CWA-854HT will try to get all IEEE 802.11b packets. However, activating this feature reduces performance.
Apply Changes	Click Apply Changes to save the changes. The CWA-854HT will reboot to make the changes take effect.
Turbo Mode	CWA-854HT provides the turbo mode function to enhance the wireless performance, but it must be worked with our specific wireless client.
Reset	Click Reset to undo the changes.
Help	Click Help to display on-line help information in a pop-up screen.

2.7. Wireless: Security

Configure security for the wireless interface in the **Wireless Security Setup** screen. The CWA-854HT supports four wireless security options: **WEP**, **WPA**, **WPA2**, **WPA2 Mixed**. These options offer different security levels for wireless communication.

It is recommended that you use the highest security option to protect your wireless communication.

Click **Wireless > Security** to display the configuration screen. The applicable fields vary depending on the security option you select in the **Encryption** field.

Figure 2-12 Wireless: Wireless Security Setup

Wireless Security Setup

This page allows you to setup the wireless security. Turn on WEP or WPA by using Encryption Keys can prevent any unauthorized access to your wireless network.

Encryption:

☐ Use 802.1x Authentication ☒ WEP 64bits ☐ WEP 128bits

WPA Authentication Mode: ☐ Enterprise (RADIUS) ☒ Personal (Pre-Shared Key)

WPA Cipher Suite: ☒ TKIP ☐ AES

WPA2 Cipher Suite: ☐ TKIP ☐ AES

Pre-Shared Key Format:

Pre-Shared Key:

☐ Enable Pre-Authentication

Authentication RADIUS Server: Port IP address

Password

Note: When encryption WEP is selected, you must set WEP key value.

2.7.1. Wireless: Security: WEP

WEP (Wired Equivalent Privacy) uses a key to encrypt and decrypt traffic transmitted wirelessly. WEP keeps wireless communication private.

Both the CWA-854HT and the connected wireless device(s) must use the same WEP key for communication.

WEP does not provide user authentication. You can enable IEEE 802.1x on the CWA-854HT to authenticate a user before wireless access is allowed.

In the WebGUI, click **Wireless > Security** and select **WEP** in the **Encryption** field.

Figure 2-13 Wireless: Security: WEP

Wireless Security Setup

This page allows you to setup the wireless security. Turn on WEP or WPA by using Encryption Keys can prevent any unauthorized access to your wireless network.

Encryption:

WEP

Set WEP Key

☐ Use 802.1x Authentication

☒ WEP 64bits

☐ WEP 128bits

WPA Authentication Mode:

☐ Enterprise (RADIUS)

☒ Personal (Pre-Shared Key)

WPA Cipher Suite:

☒ TKIP

☐ AES

WPA2 Cipher Suite:

☐ TKIP

☐ AES

Pre-Shared Key Format:

ASCII

Pre-Shared Key:

☐ Enable Pre-Authentication

Authentication RADIUS Server:

Port

1812

IP address

Password

Note: When encryption WEP is selected, you must set WEP key value.

Apply Changes

Reset

Help

Table 2-9 Wireless: Security: WEP

LABEL	DESCRIPTION
Encryption	Select WEP to basic data encryption.
Set WEP Key	Click Set WEP Key to set the WEP keys.
Use 802.1x Authentication	Select this option to enable user authentication. Users must enter the same password (specified in the Password field) to access the wireless network. Select the length of the encryption key to protect the password transmitted. Choices are WEP 64bits and WEP 128bits .
Authentication RADIUS Server	Specify the RADIUS server information in the fields provided.
Port	Enter the authentication port number.

Table 2-9 Wireless: Security: WEP

LABEL	DESCRIPTION
IP Address	Enter the IP address of the RADIUS server in dotted decimal notation. For example, 192.168.1.10.
Password	Specify the password that all users must enter before access to the wireless network is allowed.
Apply Changes	Click Apply Changes to save the changes. The CWA-854HT will reboot to make the changes take effect.
Reset	Click Reset to undo the changes.
Help	Click Help to display on-line help information in a pop-up screen.

Wireless: Security: WEP: Set WEP Key

Click **Set WEP Key** to display the configuration screen as shown.

Figure 2-14 Wireless: Security: WEP: Set WEP Key

Wireless WEP Key Setup

This page allows you to setup the WEP key value. You choose either 64-bit or 128-bit as the encryption key, and select ASCII or Hex as the format of input value.

Key Length: 64-bit ▼
Key Format: ASCII (5 characters) ▼
Default Tx Key: Key 1 ▼
Encryption Key 1:
Encryption Key 2:
Encryption Key 3:
Encryption Key 4:

Table 2-10 Wireless: Security: WEP: Set WEP Key

LABEL	DESCRIPTION
Key Length	Select the encryption key length. Choices are 64-bit and 128-bit . Select 128-bit for higher security.
Key Format	Specify how you want to enter the keys. Select Hex to enter hexadecimal format (that starts with 0x). Select ASCII to enter alphanumeric characters (a-z, A-Z, 0-9) for the keys.
Default Tx Key	Select the default key to encrypt data before transmitting.
Encryption Key 1 .. 4	If you select 64-bit in the Key Length field, enter 10 hexadecimal or 5 ASCII characters. If you select 128-bit in the Key Length field, enter 26 hexadecimal or 13 ASCII characters. As you enter the keys, an asterisk “*” displays for each character you enter.
Apply Changes	Click Apply Changes to save the changes. The CWA-854HT will reboot to make the changes take effect.
Close	Click Close to close this screen. All unsaved changes will be lost.
Reset	Click Reset to undo the changes.

2.7.2. Wireless: Security: WPA/ WPA2/ WPA2 Mix

WPA (WiFi Protected Access) is a subset of IEEE802.11i and provides better data encryption over WEP and optional authentication.

WPA2 (WiFi Protected Access 2), also known as IEEE 802.11i, has improved data encryption and user authentication compared to WPA. For AES, WPA2 uses a 256-bit block data encryption.

Figure 2-15 Wireless: Security: WPA

Wireless Security Setup

This page allows you to setup the wireless security. Turn on WEP or WPA by using Encryption Keys can prevent any unauthorized access to your wireless network.

Encryption:

WPA

Set WEP Key

☐ Use 802.1x Authentication

☒ WEP 64bits

☐ WEP 128bits

WPA Authentication Mode:

☐ Enterprise (RADIUS)

☒ Personal (Pre-Shared Key)

WPA Cipher Suite:

☒ TKIP

☐ AES

WPA2 Cipher Suite:

☐ TKIP

☐ AES

Pre-Shared Key Format:

ASCII

Pre-Shared Key:

☐ Enable Pre-Authentication

Authentication RADIUS Server:

Port

1812

IP address

Password

Note: When encryption WEP is selected, you must set WEP key value.

Apply Changes

Reset

Help

Table 2-11 Wireless: Security: WPA

LABEL	DESCRIPTION
Encryption	Select WPA , WPA2 or WPA2 Mix (for both WPA and WPA2).
Use 802.1x Authentication	Select this option to enable IEEE 802.1x for user authentication.
WPA Authentication Mode	Specify the authentication mode to use. Select Enterprise (RADIUS) if you have an external RADIUS (Remote Authentication Dial-In User Service) server to authenticate a user. Select Personal (Pre-Shared Key) if you do not have a RADIUS server. All wireless devices in the same wireless network must use the same pre-shared key.

Table 2-11 Wireless: Security: WPA

LABEL	DESCRIPTION
WPA/ WPA2 Cipher Suite	Specify an encryption method to use. Select TKIP (Temporal Key Integrity Protocol) that uses a stronger encryption algorithm and protects against hackers with MIC (Message Integrity Check). Select AES (Advanced Encryption System) that uses symmetric 128-bit block data encryption.
Pre-Shared Key Format	Specify how you want to enter the keys. Select Hex to enter hexadecimal format (that starts with 0x). Select ASCII to enter alphanumerical characters (a-z, A-Z, 0-9) for the keys.
Pre-Shared Key	Enter between 8 to 32 characters for the pre-shared key. All wireless devices in the same wireless network must use the same pre-shared key.
Apply Changes	Click Apply Changes to save the changes. The CWA-854HT will reboot to make the changes take effect.
Reset	Click Reset to undo the changes.
Help	Click Help to display on-line help information in a pop-up screen.

2.8. Wireless: Wireless Access Control

Use the **Wireless Access Control** to set the CWA-854HT to allow or block wireless access based on a computer's MAC address. This allows you to restrict wireless access and increase security.

Click **Wireless > Wireless Access Control** to display the configuration screen as shown.

Figure 2-16 Wireless: Wireless Access Control

Wireless Access Control

If you choose 'Allowed Listed', only those clients whose wireless MAC addresses are in the access control list will be able to connect to your Access Point. When 'Deny Listed' is selected, these wireless clients on the list will not be able to connect to the Access Point.

Wireless Access Control Mode:

Disable

MAC Address:

Comment:

Apply Changes

Reset

Current Access Control List:

MAC Address	Comment	Select
-------------	---------	--------

Delete Selected

Delete All

Reset

Help

Table 2-12 Wireless: Wireless Access Control

LABEL	DESCRIPTION
Wireless Access Control Mode	Set the access control action to apply on the specified computer(s). Select Allow Listed to grant wireless access to only the computer(s) with the specified MAC address(es). Computers with MAC address not listed are blocked wireless access to the CWA-854HT. Select Deny Listed to block wireless access to the computer(s) with the specified MAC address(es). Computers with MAC addresses not listed below are allowed wireless access. Select Disable to deactivate wireless access control. This allows all computers wireless access to the CWA-854HT.
MAC Address	Enter the MAC address of a computer on which you want to restrict wireless access. For example, 0023f6378a1.
Comment	Enter a description for this access control rule.
Apply Changes	Click Apply Changes to save the changes. The CWA-854HT will reboot to make the changes take effect.
Reset	Click Reset to undo the changes.
Current Access	This table displays the current wireless access control settings on the CWA-854HT.

Table 2-12 Wireless: Wireless Access Control

LABEL	DESCRIPTION
Control List	
MAC Address	This field displays the MAC address of the computer to which this access control setting applies.
Comment	This field displays the description for this access control setting.
Select	Select this option to delete the MAC filter.
Delete Selected	Click Delete Selected to delete the selected access control setting(s). When you click this button, a warning screen displays. Click OK to continue.
Delete All	Click Delete All to remove all access control setting(s). When you click this button, a warning screen displays. Click OK to continue.
Reset	Click Reset to clear the Select check box(es).
Help	Click Help to display on-line help information in a pop-up screen.

2.8.1. Example: Allow Wireless Access on a Computer

The following figure shows an example where the CWA-854HT allows wireless access from a computer with the MAC address of 00:02:3f:63:78:a1. All other computers are not allowed to access the CWA-854HT over the wireless interface.

Figure 2-17 Wireless: Wireless Access Control: Example

Wireless Access Control

If you choose 'Allowed Listed', only those clients whose wireless MAC addresses are in the access control list will be able to connect to your Access Point. When 'Deny Listed' is selected, these wireless clients on the list will not be able to connect to the Access Point.

Wireless Access Control Mode:

Allow Listed

MAC Address:

00023F6378A1

Comment:

Test

Apply Changes

Reset

Current Access Control List:

MAC Address	Comment	Select
-------------	---------	--------

Delete Selected

Delete All

Reset

Help

2.9. WDS (Wireless Distributed System)

The **WDS** screen is applicable when you set the CWA-854HT to operate in WDS mode in the **Wireless Basic Settings** screen. WDS allows the CWA-854HT to act as a bridge to connect to other wireless APs in bridge mode. This allows two LAN networks to communicate to each other wirelessly.

To participate in a WDS, wireless APs must be set to operate in bridge mode with the same channel and know each other's MAC address. If applicable, they must also use the same security settings.

Click **Wireless > WDS** to display the configuration screen as shown.

Figure 2-18 Wireless: WDS Settings

WDS Settings

Wireless Distribution System uses wireless media to communicate with other APs, like the Ethernet does. To do this, you must set these APs in the same channel and set MAC address of all other APs which you want to communicate with in the table and then check enable WDS.

☐ **Enable WDS**

Add WDS AP:

MAC Address

Comment

Apply Changes

Reset

Set Security

Current WDS AP List:

MAC Address	Comment	Select
-------------	---------	--------

Delete Selected

Delete All

Reset

Help

Table 2-13 Wireless: WDS Settings

LABEL	DESCRIPTION
Enable WDS	Select this option to activate this feature.
Add WDS AP	Enter the MAC address of another wireless device participating in this WDS. For example, 0023f6378a1.
Comment	Enter a description for this setting.
Apply Changes	Click Apply Changes to save the changes. The CWA-854HT will reboot to make the changes take effect.
Reset	Click Reset to undo the changes.
Set Security	Click Set Security to display a screen to configure WDS security settings.
Show Statistics	Click Show Statistics to view the connection status in the WDS.
Current WDS AP List	This table displays the list of wireless APs participating in this WDS.

Table 2-13 Wireless: WDS Settings

LABEL	DESCRIPTION
MAC Address	This field displays the MAC address of the wireless AP in this WDS.
Comment	This field displays the description for this setting.
Select	Select this option to delete the wireless AP.
Delete Selected	Click Delete Selected to delete the selected wireless AP(s). When you click this button, a warning screen displays. Click OK to continue.
Delete All	Click Delete All to remove all wireless AP(s). When you click this button, a warning screen displays. Click OK to continue.
Reset	Click Reset to clear the Select check box(es).
Help	Click Help to display on-line help information in a pop-up screen.

2.9.1. Wireless: WDS: Set Security

You can set the security settings for the WDS in the **WDS Security Setup** screen.

You must set the same encryption method and key in the same WDS.

Figure 2-19 Wireless: WDS: WDS Security Setup

WDS Security Setup

This page allows you setup the wireless security for WDS. When enabled, you must make sure each WDS device has adopted the same encryption algorithm and Key.

Encryption:

None

WEP Key Format:

ASCII (5 characters)

WEP Key:

Pre-Shared Key Format:

ASCII

Pre-Shared Key:

Apply Changes

Close

Reset

Table 2-14 Wireless: WDS: WDS Security Setup

LABEL	DESCRIPTION
Encryption	Select the encryption method in this field.
WEP Key Format	Specify how you want to enter the keys. Select Hex to enter hexadecimal format (that starts with 0x). Select ASCII to enter alphanumerical characters (a-z, A-Z, 0-9) for the keys.
WEP Key	If you select 64-bit in the Key Length field, enter 10 hexadecimal or 5 ASCII characters. If you select 128-bit in the Key Length field, enter 26 hexadecimal or 13 ASCII characters. As you enter the keys, an asterisk “*” displays for each character you enter.
Pre-Shared Key Format	Specify how you want to enter the keys. Select Hex to enter hexadecimal format (that starts with 0x). Select ASCII to enter alphanumerical characters (a-z, A-Z, 0-9) for the keys.
Pre-Shared Key	Enter between 8 to 32 characters for the pre-shared key. All wireless devices in the same wireless network must use the same pre-shared key.
Apply Changes	Click Apply Changes to save the changes. The CWA-854HT will reboot to make the changes take effect.

Table 2-14 Wireless: WDS: WDS Security Setup

LABEL	DESCRIPTION
Close	Click Close to close this screen. All unsaved changes will be lost.

2.10. Management: Status

View current device status in the **Wireless-G High Transmission AP Status** screen. Click **Management > Status**.

Figure 2-20 Management: Status

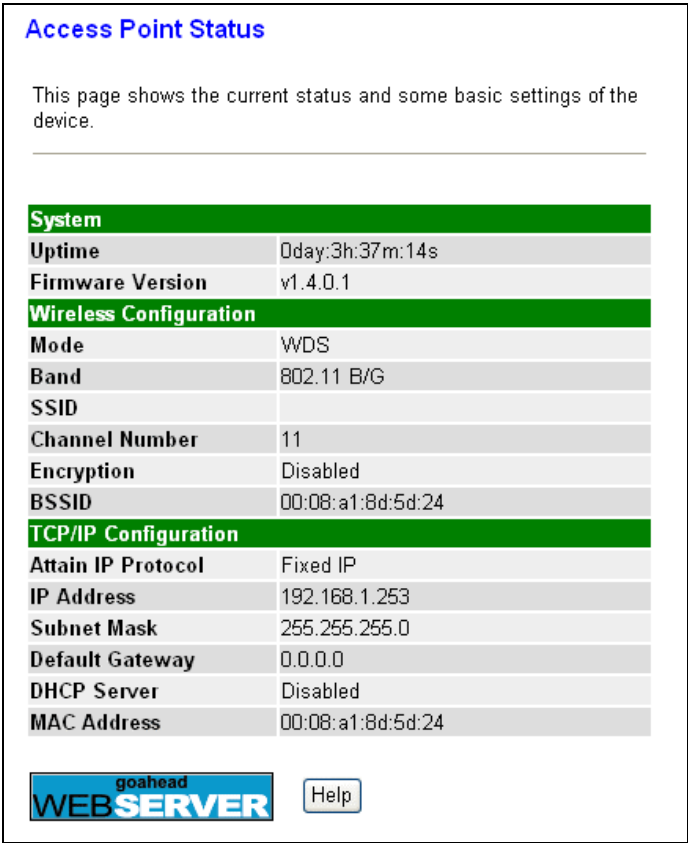


Table 2-15 Management: Status

LABEL	DESCRIPTION
System	
Uptime	This field displays the time that elapsed since the CWA-854HT last reboots.
Firmware Version	This field displays the current firmware version number.
Wireless Configuration	
Mode	This field displays the wireless operating mode on the CWA-854HT.
Band	This field displays the wireless protocol the CWA-854HT uses.
SSID	This field displays the unique name for the wireless network.
Channel Number	This field displays the operating frequency the CWA-854HT uses.
Encryption	This field displays whether data encryption is activated for the wireless interface.
BSSID	This field displays the ID (or MAC address) of the wireless interface.
Associated Clients	This field displays the number of wireless computers currently connected to the CWA-854HT.
TCP/IP Configuration	
Attained IP Protocol	This field displays the IP addressing type on the LAN interface.
IP Address	This field displays the LAN IP address.
Subnet Mask	This field displays the subnet mask associated with the IP address above.
Default Gateway	This field displays the IP address of the gateway device.
DHCP Server	This field displays whether DHCP server is activated on the CWA-854HT.
MAC Address	This field displays MAC address of the LAN Interface.
Help	Click Help to display on-line help information in a pop-up screen.

2.11. Management: DHCP Settings

The **DHCP Settings** screen allows you to set the Dynamic Host Configuration Protocol (DHCP) server settings on the CWA-854HT. A DHCP server automatically assigns an IP address to each connected computer on the network. You must configure the computers to automatically receive an IP address from the DHCP server (the CWA-854HT) and make sure there is no other DHCP server(s) on the same network.

Click **Management > DHCP Settings** to display the configuration screen.

Figure 2-21 Management: DHCP Settings

DHCP Settings

This page is used to configure the parameters for local area network which connects to the LAN port of your Wireless-G Access Point. Here you may change the setting for DHCP.

☐ **Enable DHCP Server**

DHCP Client Range: -

Domain Name:

Dynamic DHCP Client List

IP Address	MAC Address	Time Expired(s)
None	----	----

Table 2-16 Management: DHCP Settings

LABEL	DESCRIPTION
Enable DHCP Server	Select this option set the CWA-854HT to act as a DHCP server providing IP address(es) to connected computers. Click this option to disable this feature. You must then set up a DHCP server on the network or assign the computers fixed IP addresses.

Table 2-16 Management: DHCP Settings

LABEL	DESCRIPTION
DHCP Client Range	Specify the range of the IP address pool to assign the computers. The DHCP client IP addresses you specify here must be in the same subnet as the LAN interface on the CWA-854HT. When you change the LAN IP address in the LAN Interface screen, these fields are automatically updated to be in the same subnet.
Domain Name	Assign a domain name for this DHCP Server.
Apply Changes	Click Apply Changes to save the changes. The CWA-854HT will reboot to make the changes take effect.
Reset	Click Reset to undo the changes.
Dynamic DHCP Client IP	This table displays the information of the DHCP client(s) that is assigned an IP address from the CWA-854HT.
IP Address	This field displays the IP address assigned to a DHCP client.
MAC Address	This field displays the MAC address of the DHCP client.
Time Expired(s)	This field displays the time(s) the DHCP client is allowed to use the IP address. After the time expires, the DHCP client must obtain a new IP address from the CWA-854HT again.
Refresh	Click Refresh to update this table.
Help	Click Help to display on-line help information in a pop-up screen.

2.12. Management: Password

The default administrative login name is **root** and the default password is **1234**. It is recommended you change the default login password after the first login.

Figure 2-22 Management: Password

Password Setup

This page is used to set the account to access the web server of Access Point.
Empty user name and password will disable the protection.

User Name:

New Password:

Confirmed Password:

Apply Changes

Reset

Help

Table 2-17 Management: Password

LABEL	DESCRIPTION
User Name	The default user name is root. Specify a new user name. Enter a name between 1 to 30 alphanumerical characters. If you don't want to change the default user name, enter root. The user name is case sensitive. If you leave this field blank, login authentication will be disabled. That means you don't need to enter a user name and password to log into the WebGUI for management. This is NOT recommended.
New Password	Enter the new password. The password can be between 1 and 30 alphanumerical characters. The password is case sensitive.
Confirm Password	Enter the new password again for confirmation.
Apply Changes	Click Apply Changes to save the changes. The CWA-854HT will reboot to make the changes take effect.
Reset	Click Reset to undo the changes.
Help	Click Help to display on-line help information in a pop-up screen.

2.13. Management: Firmware Upgrade

The firmware on the CWA-854HT is upgraded through the WebGUI. Follow the steps below.

Make sure you upgrade the correct firmware to the device. Upgrading a wrong firmware to the device may render it useless.

1. Download the latest firmware version from the product web site at <http://www.cnet.com.tw>.
2. In the WebGUI, click **Management > Firmware Upgrade** to display the screen as shown.
3. Specify the location and name of the firmware in the **Select File** field or click **Browse** to locate it.
4. Click **Upload** to start the firmware upgrade process.

Figure 2-23 Management: Firmware Upgrade

Upgrade Firmware

This page allows you to upgrade the Access Point firmware to new version. Please note, do not power off the device during the upload because it may crash the system.

Select File:

Do NOT turn off during the firmware upgrade process. Doing so may render your device useless.

5. After the firmware upgrade process is successful, the screen displays as shown. Click **OK**. The CWA-854HT automatically restarts to make the changes take effect.

Figure 2-24 Management: Firmware Upgrade: Successful

Update successfully (size = 1943355 bytes)!

Please wait a while for rebooting...

2.14. Management: Save/Restore Settings

Use the **Save/Restore Settings** screen to back up the device settings, restore configuration or reset the

CWA-854HT back to the factory default settings.

Figure 2-25 Management: Save/Restore Settings

Save/Reload Settings

This page allows you to save current settings to a file or reload the settings from the file which was saved previously. Besides, you may reset the current configuration to factory default.

Save Settings to File:

Load Settings from File:

Reset Settings to Default:

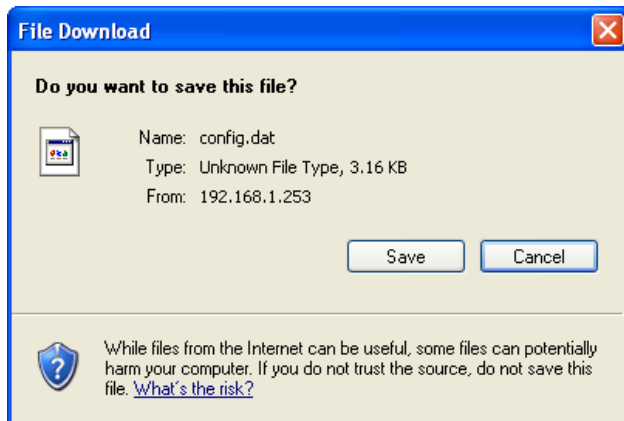
2.14.1. Save Current Configuration

You can back up the device configuration information to a file on your computer. This is recommended after you have complete settings on the CWA-854HT and that it is fully operatable for your network.

Follow the steps below to back up a copy of the device configuration.

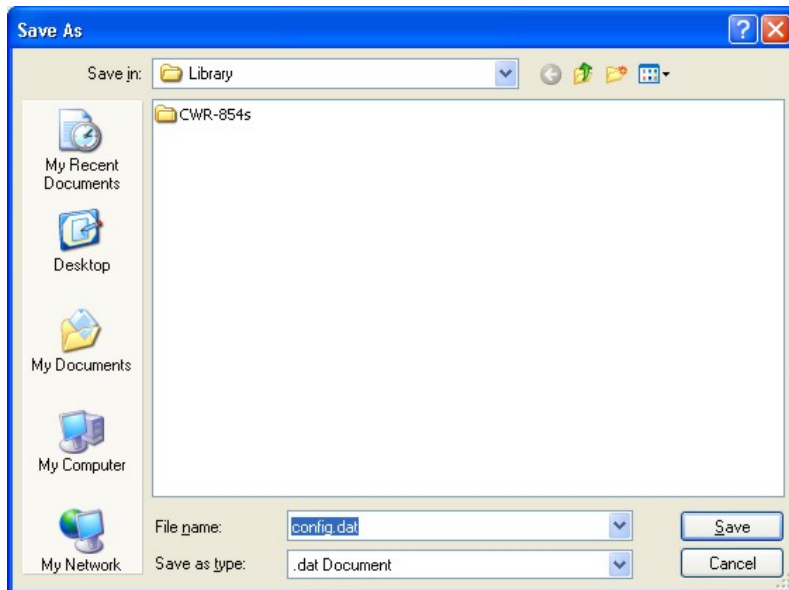
1. In the WebGUI, click **Management > Save/Restore Settings**.
2. Click **Save**.
3. A **File Download** screen displays as shown. Click **Save**.

Figure 2-26 Management: Save/Restore Settings: File Download



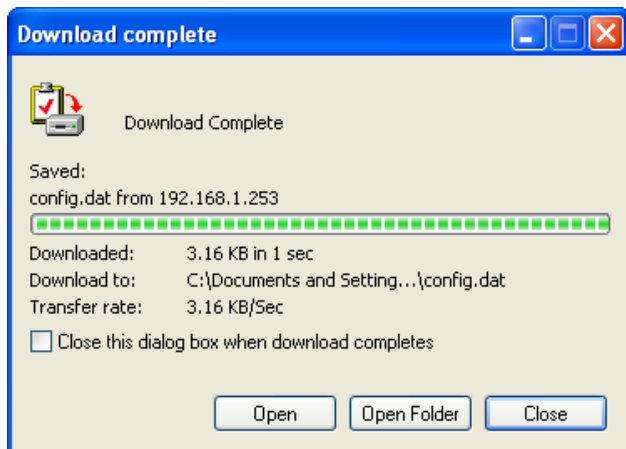
4. A **Save As** screen displays. Specify the location and name for the file. Click **Save** to start the configuration backup process.

Figure 2-27 Management: Save/Restore Settings: Save As



5. After the configuration backup process is complete, a **Download complete** displays.

Figure 2-28 Management: Save/Restore Settings: Download complete



2.14.2. Save/Restore Settings: Restore Configuration

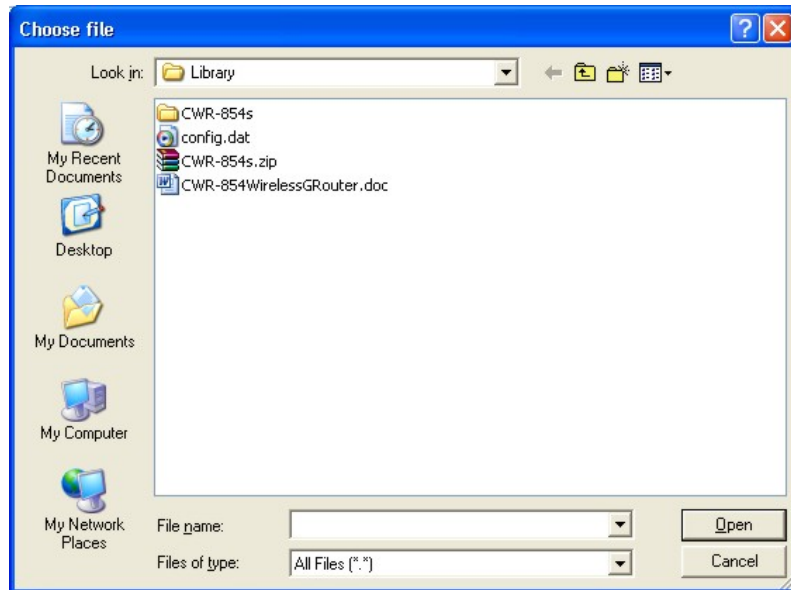
You can use the **Save/Restore Settings** screen to restore the device settings to a previous backup configuration.

Restoring settings erases all current configuration on the CWA-854HT.

Do NOT turn off the device during the file transfer process. Doing so may render your device useless.

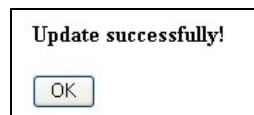
1. In the WebGUI, click **Management > Save/Restore Settings**.
2. In the **Load settings from file** field, specify the location and file name of a previously backed up file. Click **Browse** to locate it.
3. A **Choose file** screen displays. Select a backup configuration file and click **Open**.

Figure 2-29 Management: Save/Restore Settings: Choose file



4. Click **Upload** to start the file transfer process.
5. After the process is successful, the screen displays as shown. Click **OK**.

Figure 2-30 Management: Save/Restore Settings: Restore Configuration Complete



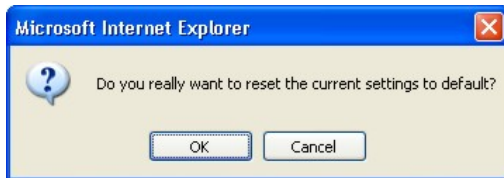
6. The CWA-854HT automatically restarts to make the changes take effect. Wait until the reboot process is finished before accessing the device again.

2.14.3. Save/Restore Settings: Reset

Resetting the device erases all custom settings.

1. To reset the CWA-854HT back to the factory default settings, click **Reset** in the **Save/Restore Settings** screen.
2. A warning screen displays. Click **OK**.

Figure 2-31 Management: Save/Restore Settings Prompt



3. The CWA-854HT automatically restarts to make the changes take effect. Wait until the reboot process is finished before accessing the device again.

2.15. Management: System Restart

Use the **System Restart** screen to reboot the CWA-854HT without disconnecting the power source.

Follow the steps below to restart the CWA-854HT through the WebGUI.

1. Click **Management > System Restart** to display the screen as shown.
2. Click **Apply Changes**.

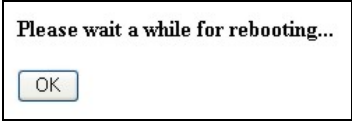
Restarting the device erases all unsaved changes.

Figure 2-32 Management: System Restart



3. The screen displays as shown. Click **OK**.

Figure 2-33 Management: System Restart: Prompt



4. Wait until the CWA-854HT finishes restarting before accessing it again.

2.16. Event Log

Use the **Event Log** screen to view logs and set log settings. By default, the CWA-854HT records logs of all management and traffic activities. You can use the logs to monitor network traffic or troubleshooting.

Figure 2-34 Event Log

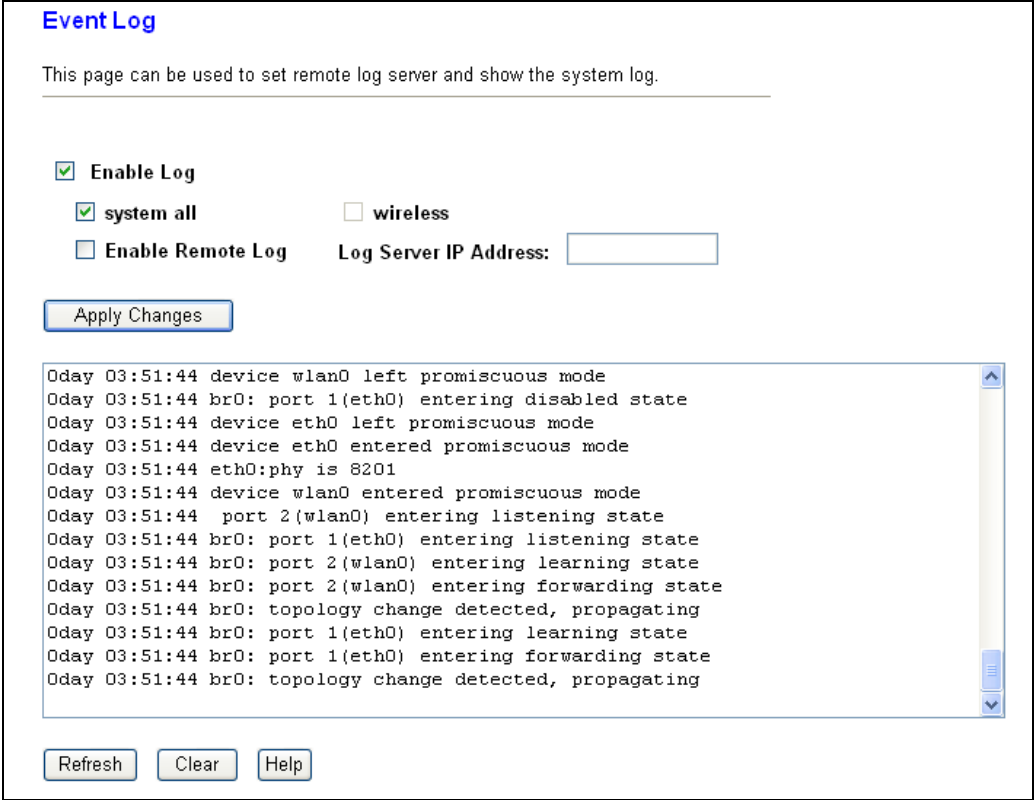


Table 2-18 Event Log

LABEL	DESCRIPTION
Enable Log	Select this option to activate system logging.
System all	Select this option to record all log types.
Wireless	Select this option to record wireless related logs.
Enable Remote Log	Select this option to record and store logs to a remote syslog server.
Log Server Address	When you select Enable Remote Log , specify the IP address of the remote syslog server. Enter the IP address in dotted decimal notation. For example, 192. 168.1.100.
Apply Changes	Click Apply Changes to save the changes. The CWA-854HT will reboot to make the changes take effect.
Refresh	Click Refresh to update this screen.
Clear	Click Clear to delete all log entries.
Help	Click Help to display on-line help information in a pop-up screen.

Appendix 1. Troubleshooting

PROBLEM	CORRECTIVE ACTION
I cannot access the CWA-854HT through a LAN port.	Check that you have turned on the CWA-854HT and your computer. Check the Ethernet connection. Make sure the Ethernet cable is not faulty and is not longer than 100M. Make sure that the IP addresses of your computer and the LAN interface on the CWA-854HT are in the same subnet. Use the “ipconfig” or “winipcfg” DOS command to check the connection. The default login user name is root and the default password is 1234. If you have changed the password and have now forgotten it, you must use the RESET button to reset the password.
I cannot access the CWA-854HT via the wireless network.	Check that you have turned on the CWA-854HT and your computer. Make sure that the wireless network/security settings are the same on the CWA-854HT and your wireless adapter. There is radio interference (such as a microwave oven, cordless phones, etc.) that may affect your wireless communication. Reduce the interference by relocating the radio source. Check that your computer is within range of the wireless coverage. Move your computer closer to the CWA-854HT. Update the driver for the wireless adapter installed on your computer. Refer to the document that comes with your wireless adapter for more information.

Appendix 2. Computer IP Address Setup

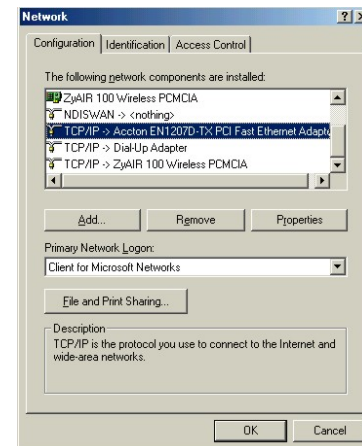
Skip this section if your computer is already set up to accept a dynamic IP address (this is the default setting for most new computers) or has a static private IP address.

By default, the CWA-854HT is set up to disable the DHCP server feature. This section shows you how to set up your computer to assign it a static IP address. Your computer IP address must be in the same range as the CWA-854HT's to allow successful connection.

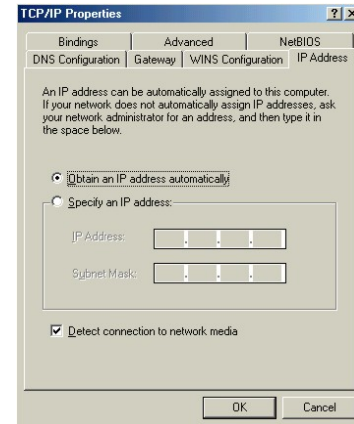
Your computer must have an Ethernet card and TCP/IP installed. TCP/IP should already be installed on computers using Windows NT/2000/XP and later operating systems.

Windows 95/98/Me

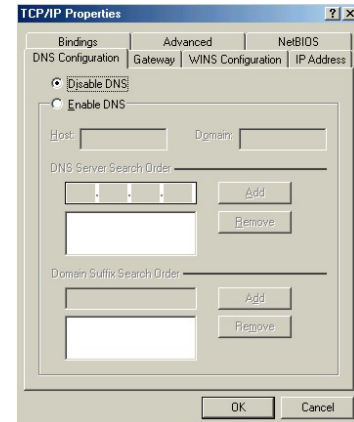
1. Click **Start > Settings > Control Panel** and double-click the **Network** icon.
2. The **Network** window displays. Click the **Configuration** tab to show a list of installed components. You need a network adapter, the TCP/IP protocol and Client for Microsoft Networks.
3. Select your network adapter's TCP/IP entry and click **Properties**.



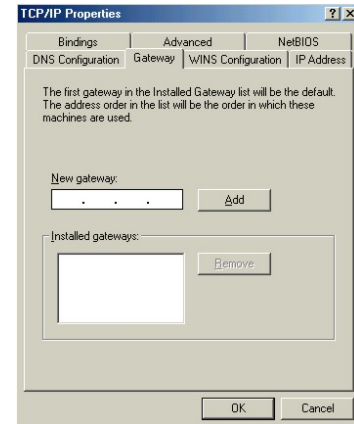
4. Click the **IP Address** tab.
 -If you have a static IP address, select **Specify an IP address** and type your information into the **IP Address** and **Subnet Mask** fields.



5. Click the **DNS Configuration** tab.
 -If you do not know your DNS information, select **Disable DNS**.
 -If you know your DNS information, select **Enable DNS** and type the information in the fields below (you may not need to fill them all in).



6. Click the **Gateway** tab.
 -If you do not know your gateway's IP address, remove previously installed gateways.
 -If you have a gateway IP address, type it in the **New gateway** field and click **Add**.

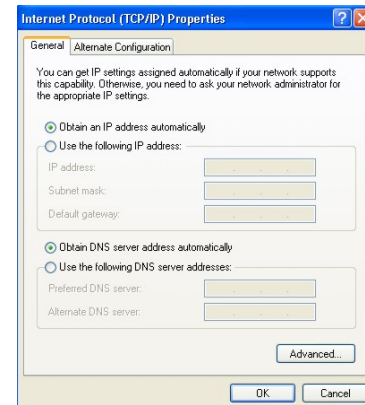


7. Click **OK** to save and close the **TCP/IP Properties** window.
8. Click **OK** to close the **Network** window. Insert the Windows CD if prompted.
9. Turn on your CWA-854HT and restart your computer when prompted.
10. Click **Start** and then **Run**.
11. In the **Run** window, type "winipcfg" and then click **OK** to open the **IP Configuration** window.
12. Select your network adapter. You should see your computer's IP address, subnet mask and default gateway.

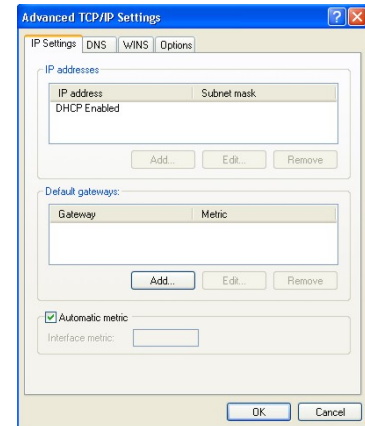
Windows 2000/NT/XP

1. In Windows XP, click **start** > **Control Panel**. In Windows 2000/NT, click **Start** > **Settings** > **Control Panel**.
2. In Windows XP, click **Network Connections**.
 In Windows 2000/NT, click **Network and Dial-up Connections**.
3. Right-click **Local Area Connection** and then click **Properties**.
4. Select **Internet Protocol (TCP/IP)** (under the **General** tab in Win XP) and click **Properties**.

5. The **Internet Protocol TCP/IP Properties** screen opens (the **General tab** in Windows XP).
- To configure a static IP address, click **Use the following IP Address** and fill in the **IP address** (choose one from 192.168.1.1 to 192.168.1.250), **Subnet mask** (255.255.255.0), and fill the **Default gateway** fields if you know that.
 - Then enter your DNS server IP address(es) in the **Preferred DNS server** and/or **Alternate DNS server** fields.
- If you have more than two DNS servers, click **Advanced**, the **DNS** tab and then configure them using **Add**.



6. Click **Advanced**. Remove any previously installed gateways in the **IP Settings** tab and click **OK** to go back to the **Internet Protocol TCP/IP Properties** screen.



7. Click **OK** to close the **Internet Protocol (TCP/IP) Properties** window.
8. Click **OK** to close the **Local Area Connection Properties** window.
9. In the computer, click Start, (All) Programs, Accessories and then Command Prompt.
10. In the Command Prompt window, type "ipconfig" and then press ENTER to verify that your computer's IP address is in the correct range (192.168.1.1 to 192.168.1.250) with subnet mask 255.255.255.0. This is necessary in order to communicate with the CWA-854HT.

Testing the Connection to the CWA-854HT

1. Click **Start > (All) Programs > Accessories > Command Prompt**.
2. In the **Command Prompt** window, type "**ping**" followed by a space and the LAN IP address of the CWA-854HT (192.168.1.253 is the default).
3. Press [ENTER] and the following screen displays. Reply messages indicate that the connection is successful.

```
C:\>ping 192.168.1.253

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.253: bytes=32 time=10ms TTL=254
Reply from 192.168.1.253: bytes=32 time<10ms TTL=254
Reply from 192.168.1.253: bytes=32 time<10ms TTL=254
Reply from 192.168.1.253: bytes=32 time<10ms TTL=254

Ping statistics for 192.168.1.253:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 10ms, Average = 2ms
C:\>
```